Copied from the San Francisco Bay Conservation and Development Commission's Public Access and Wildlife Compatibility Staff Report, March 2001 (thumbnail sketches have been added for the purposes of the Hamilton Wetland Restoration Project the Public Access Plan)

TABLE A.

Public Access and Wildlife Compatibility Siting, Design And Management Strategies Matrix

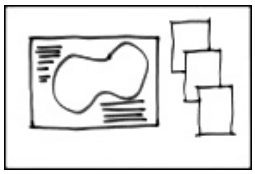
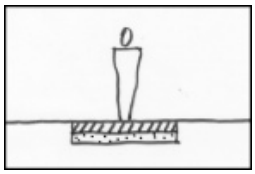
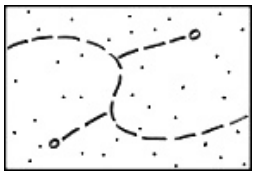
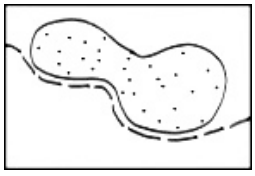
STRATEGY	ADVANTAGES	CHALLENGES
SITING AND DESIGN		
Site Analysis 	• Inventory and analysis of site prior to public access design and construction can generate useful information on potential recreational and educational uses, and on species and habitats that can be used to better design public access features to avoid or minimize adverse effects.	• Thorough site data gathering and analysis requires time and staff and funds
Construction Materials 	• A durable pathway will reduce impact to adjacent habitat (via erosion, for example) • A durable pathway will help limit creation of alternative access routes by users trying to avoid muddy or unsafe pathways	• The more durable the pathway, the less natural the area becomes (need to weigh trail durability with overall management objectives for site)
Varied and Interesting Access Experience 	• Providing users with a fulfilling varied and interesting public access experience will keep users in designated areas and limit the creation of informal routes	• Access route must be designed to limit impacts on resources
Perimeter/Loop Pathway 	• Provides user with visual access to interesting habitat, yet preserves an enclosed, undisturbed interior habitat • May reduce overall use (public passes only once) • May require fewer parking/staging areas • Provides predictability of human use for wildlife	• Design may not adequately discourage social trails • Continuous perimeter access may have a greater impact on resources than point access.

TABLE A, Cont.

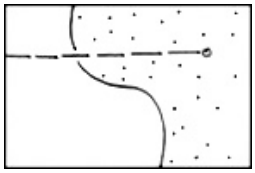
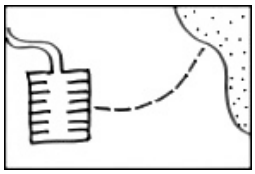
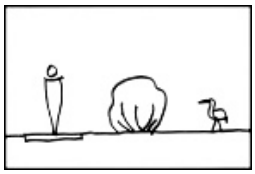
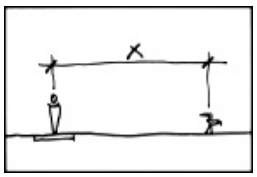
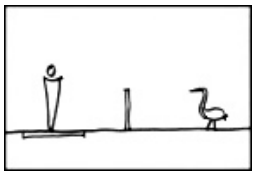
STRATEGY	ADVANTAGES	CHALLENGES
SITING AND DESIGN, cont.		
Spur Trails/Point Access 	• Limits physical access to sensitive areas while providing users with some access • Spur trails tend to have lower volumes of users • Provides predictability of human use for wildlife	• Public may be enticed to wander past end of the trail, creating social trails and potentially impacting sensitive habitat/species • Pathway must be designed to limit impacts
Locate Parking/Staging Areas Away From Sensitive Habitat 	• May limit number of users visiting sensitive areas, because access is more difficult (use levels are often reduced beyond 1/4 to 1/2 mile from parking/staging area)	• May limit utility of site as an educational tool or recreational resource • May limit wildlife viewing opportunities
Buffers/Access Control: Vegetation 	• Can provide physical barrier to keep users out of sensitive areas • Provides a "natural" barrier (can restore native plant communities to area) • Can visually screen wildlife from trail users • Can provide sound buffer for wildlife • Can control erosion • Can serve as wildlife habitat/wildlife cover	• May obstruct visual access • May be difficult to maintain based on plants used • May provide habitat for predators • May not keep out dogs or children
Buffers/Access Control: Open Space 	• Can limit impact and provide for good visual access without physical barriers • Potential for large distance between wildlife and public which may allow for wildlife avoidance of public or for wildlife escape routes	• Users may still access sensitive areas away designated access areas
Buffers/Access Control: Fencing 	• Can allow some visual access while preventing physical access by both people and dogs • Can temporarily protect restoration sites	• May obstruct visual access • May provide perches for predators • May be expensive and difficult to maintain

TABLE A, Cont.

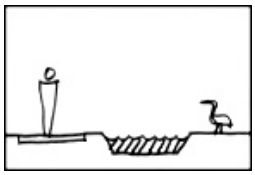
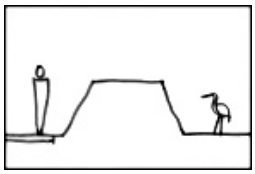
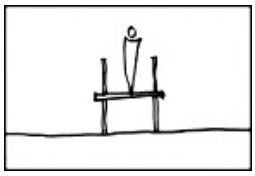
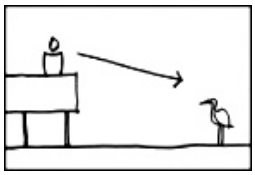
STRATEGY	ADVANTAGES	CHALLENGES
SITING AND DESIGN, cont.		
Buffers/Access Control: Moats/Wetlands 	• Creates physical barrier (often unpassable) while still providing for good visual access	• May not prevent predator access (i.e., red fox may swim across moat) • Moat or wetland may contain sensitive species • Access at edge of wetland habitat may block wetland species from accessing upland dry areas at high tide periods
Buffers/Access Control: Levees 	• Can provide physical barrier to keep users out of sensitive areas	• Depending on placement of access features, may obstruct visual access and encourage creation of informal trails • May provide access corridors for predators
Buffers/Access Control: Bridges/ Boardwalks 	• Can provide physical access to sensitive areas (such as wetlands) while limiting direct impact to habitat (restricts and confines human use) • Provides predictability of human use for wildlife, which may increase ability of wildlife to adapt to human activity	• May cause indirect effects (i.e., shading) • Potential impact from potential for close physical contact with wildlife/habitat areas • Based on use levels, potential negative social reaction to concentrated use in small area – may lead to social trails to avoid crowds • May be expensive and difficult to maintain • Adaptation ability of species highly variable
Buffers/Access Control: Viewing Platforms/ Overlooks 	• Restricts and confines use while providing desired visual access (may prevent creation of social trails) • Limits contact with wildlife • Provides predictability of human use for wildlife, which may increase ability of wildlife to adapt to human activity	• May provide perch for predators • Based on use levels, potential negative social reaction to concentrated use in small area – may lead to social trails to avoid crowds • May be expensive and difficult to maintain • Adaptation ability of species highly variable

TABLE A, Cont.

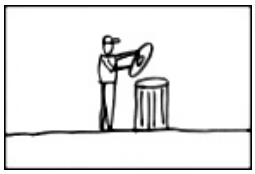
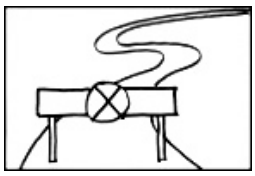
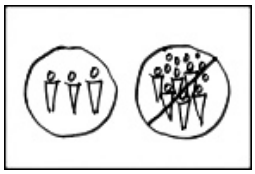
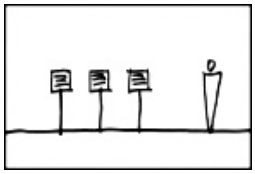
STRATEGY	ADVANTAGES	CHALLENGES
SITING AND DESIGN, cont.		
Prohibition of Public Access Pathway Development/No Public Access 	• Adverse effects on wildlife from public access can be avoided • Avoids habitat fragmentation	• If access is needed or desired, alternative route may be difficult to locate/design • Some public objectives may be lost • Uncontrolled dispersed access may lead to greater impacts than controlled access (impact on a larger area, lack of human predictability for wildlife) • May require signage/enforcement • May be expensive/difficult to maintain
Maintenance Provisions 	• Maintains public safety • Maintains public satisfaction with access opportunities and decreases creation of informal access due to blocked views, etc.	• May require long term staff and funding needs
USE MANAGEMENT		
Closures 	• Periodic closures based on time of day, season or tidal regime may avoid/minimize impact use on certain wildlife species during sensitive periods (i.e., during breeding seasons or at high tide when species are forced upland) • Periodic closures may allow for habitat recovery	• Requires site-specific knowledge of species • Management strategy for site must allow periodic closure (may not be desirable or feasible for multi-use public accessways) • Some public objectives may be lost • Requires staff management/enforcement
Limits on Number of Users 	• Reducing numbers of users may reduce adverse effects on habitat and wildlife • May increase visitor satisfaction	• Requires ability to monitor/manage visitor numbers (staffed entrance, permitting, etc.) • May be difficult to define appropriate visitor number level • Use may also be limited with lack of signage (limit ability to find/follow trail) or low maintenance (psychological deterrent), but techniques may not be practical or desirable for multi-use public access • May not substantially reduce impact
Visitor Activity Restrictions 	• Limiting to specific types of uses may lessen wildlife impact (i.e., pedestrian only pathways, vehicle tour trails, etc.) • Certain types of activities may be limited by trail width, surface and amenities (which may also limit number of users)	• Requires site specific knowledge of species reactions to specific uses (e.g., tolerance of vehicles v. people, etc.) • Enforcement of regulations desirable for maximum compliance • Education on rationale behind restrictions increases compliance • Requires adequate staff resources

TABLE A, Cont.

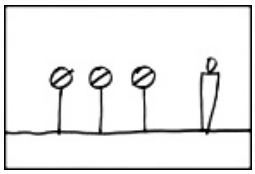
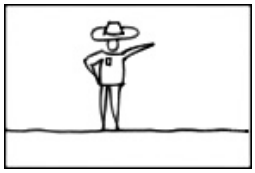
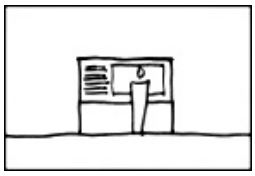
STRATEGY	ADVANTAGES	CHALLENGES
USE MANAGEMENT, Cont.		
Visitor Behavior Restrictions 	• Direct and easily implemented management tool to limit potentially destructive user behaviors (e.g., leash requirements, prohibitions on pets, no feeding wildlife, etc.) • Restricting behavior types may lower overall number of users	• Requires site specific knowledge of species reactions to specific behaviors • Enforcement of regulations desirable for maximum compliance • Education on rationale behind restrictions increases compliance • Requires adequate staff resources
Guided Trails, Docents, Rangers 	• Increased educational experience for some members of public • Better control over undesirable user behavior • Personal contact with users can be particularly effective for education and compliance • Educated users may educate others	• Requires adequate staff resources • Some public objectives (e.g., solitary access experience) may be lost
Educational/ Interpretive Materials 	• Increasing knowledge of users (regarding wildlife and the implications of users actions) decreases damaging user behavior • Explanation of reasons behind trail policies (i.e., leash requirements, closures, etc.) increases compliance with regulations • May foster public support for site • Educated users may educate others	• Requires much time and effort to research, plan, design, and construct/distribute effective materials • Requires commitment and consistency • May be expensive and difficult to maintain • More effective in areas with high number of local/habitual users • Casual park users may not be interested in passive educational programs
WILDLIFE MONITORING/MANAGEMENT		
Wildlife Monitoring	• Establishes baseline data and enables staff to track efforts to protect wildlife • Can assist in mapping critical habitat for specific species that can then be avoided	• Requires adequate staff resources over an extended period of time
Creation of Alternative Nesting Habitats	• Alternative nesting habitats can be created away from trail site	• Requires intensive management • Lack of knowledge on success of technique
Habitat Modification/ Restoration/ Enhancement/ Creation	• Potentially provides benefits for both habitat and access goals • Can enhance critical habitat for specific species • Can retain/increase habitat diversity to help alleviate competition with human use of an area	• Requires extensive site specific knowledge • May reduce wildlife viewing opportunities • Potentially controversial • May be expensive and difficult to maintain

TABLE A, Cont.

STRATEGY	ADVANTAGES	CHALLENGES
WILDLIFE MONITORING/MANAGEMENT, Cont.		
Species Re-Introductions	• Can be used as a secondary management technique to mitigate for species loss from an area	• Lack of knowledge on success of technique • Requires intensive management of area to prevent need for additional re-introductions • Potentially controversial
Predator Control	• Can be used as a secondary management technique to help ameliorate problem of pathways providing predator access routes	• Hazardous to place traps in areas frequented by people and pets • Potential for vandalism of traps • Potential negative public perception • Success depends on surrounding land uses (i.e., feral cats from adjacent urban areas)